NEVADA COMMUNICATION INTEROPERABILITY PLAN

Developed by
Nevada Communications Steering Committee

Version 2.0

April 6, 2006

Document History		
Date	**Version**	**Change**
6/28/05	1.0	Initial Release
4/06/06	2.0	Updated Action Plan, added Statement of Principles, added SAFECOM Recommendations as an Appendix. Changes approved by NCSC at their April 6, 2006 meeting.

DEPARTMENT OF INFORMATION TECHNOLOGY

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June 5, 2005

To the members of the Nevada Homeland Security Commission:

This Communication Interoperability Plan is the culmination of more than 2 years of work by the Nevada Communication Steering Committee (NCSC). The NCSC includes a broad range of communications stakeholders representing northern and southern Nevada, rural and urban Nevada, and state, county, and local governments.

The problems associated with different radio systems not being able to talk to each other have been known to first responders for decades. The events of September 11th, 2001 significantly raised the visibility of the issue. In December 2002, a statewide radio communication conference was held in Carson City, and the NCSC was formed at the Governor's direction shortly thereafter. In the 2003 Legislative session, AB441 created the Nevada Homeland Security Commission (HSC), and gave the Commission the responsibility for approving a statewide communications plan. The NCSC was given the charter to develop that plan, and the following document meets that requirement.

The plan is modeled in part on the work of the SAFECOM Office of the Department of Homeland Security. The following pages start with a high level overview of the direction being proposed, move on to a specific technical recommendation, and then continue in greater detail with specific action items grouped according to the SAFECOM paradigm. SAFECOM is actively engaged with NCSC in a complete review of our strategy, and we will be proposing a revision to this plan in early September, to incorporate their input. After that, we expect to make revisions at least bi-annually to make this a useful, living document, which adapts as conditions change.

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Chief Information Officer State of Nevada

Jack Staley, Co-Chair, NCSC
Director of Support Services LV Valley Water District

CONTENTS

DEFINITIONS, CONCEPTS AND STANDARDS

What is Interoperability?

The following definition has been adopted by the Nevada Communications Steering Committee (NCSC):

"Interoperability is the ability of appropriate officials and personnel to effectively communicate by radio across jurisdictions and with each other, when authorized, as needed and in real time."

Who are "public safety" agencies?

- Fire Services

- Law Enforcement

- Emergency Management

- Government Administrative Services

- Emergency Medical Services

- Public Health

- Health Care

- HazMat

- Private Industry

- Volunteer Organizations

- Public Safety Communication

- Public Works

STATEMENT OF PRINCIPLES – NCSC

❖ The NCSC will encourage and maintain a governance structure that emphasizes transparency, accountability and collaboration.

❖ The NCSC will encourage a comprehensive focus on key interoperability success factors, including governance, SOPs, technology, training and exercises, and usage, as discussed in the Interoperability Continuum

❖ The NCSC will review research on Best Practices and Lessons Learned.

❖ The NCSC and any successor bodies must not be controlled by the State, any State agency, or any single member, discipline, level of government, or geographic area. It must remain representative of the entire Nevada public safety community.

## i. <u>INTEROPERABILITY CONTINUUM – SAFECOM</u>

The Interoperability Continuum is designed to help the public safety community and local, tribal, state, and federal policy makers address critical elements for success as they plan and implement interoperability solutions. These elements include governance, standard operating procedures, technology, training/exercises, and usage of interoperable communications.
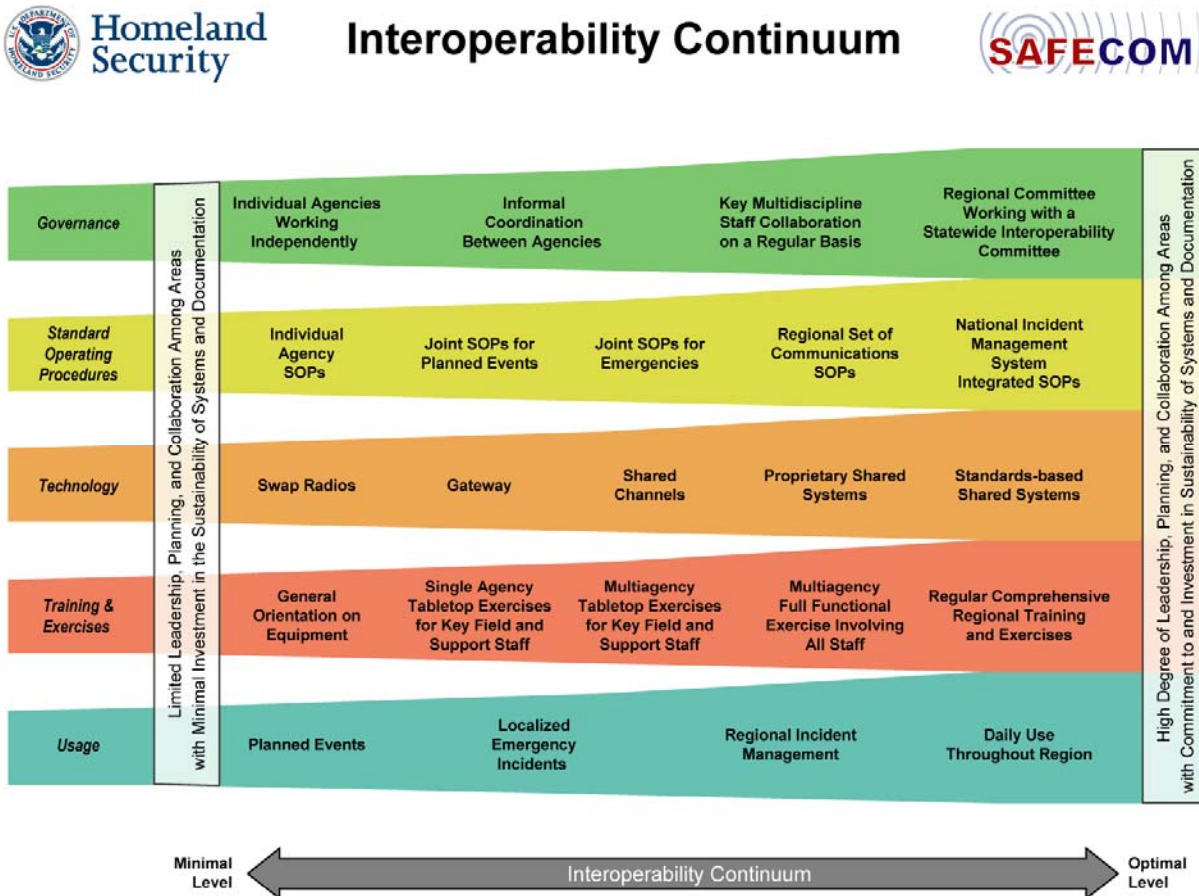
The Interoperability Continuum was developed in accordance with the Department of Homeland Security (DHS) Science & Technology (S&T) Directorates Office for Interoperability and Compatibility's SAFECOM program's locally driven philosophy and its practical experience in working with local governments across the nation. This tool was established to depict the core facets of interoperability according to the stated needs and challenges of the public safety community and will aid public safety practitioners and policy makers in their short- and long-term interoperability efforts. www.safecomprogram.gov

COMMUNICATIONS INTEROPERABILITY - SHORT TERM GATEWAYS
3 - 5 Years
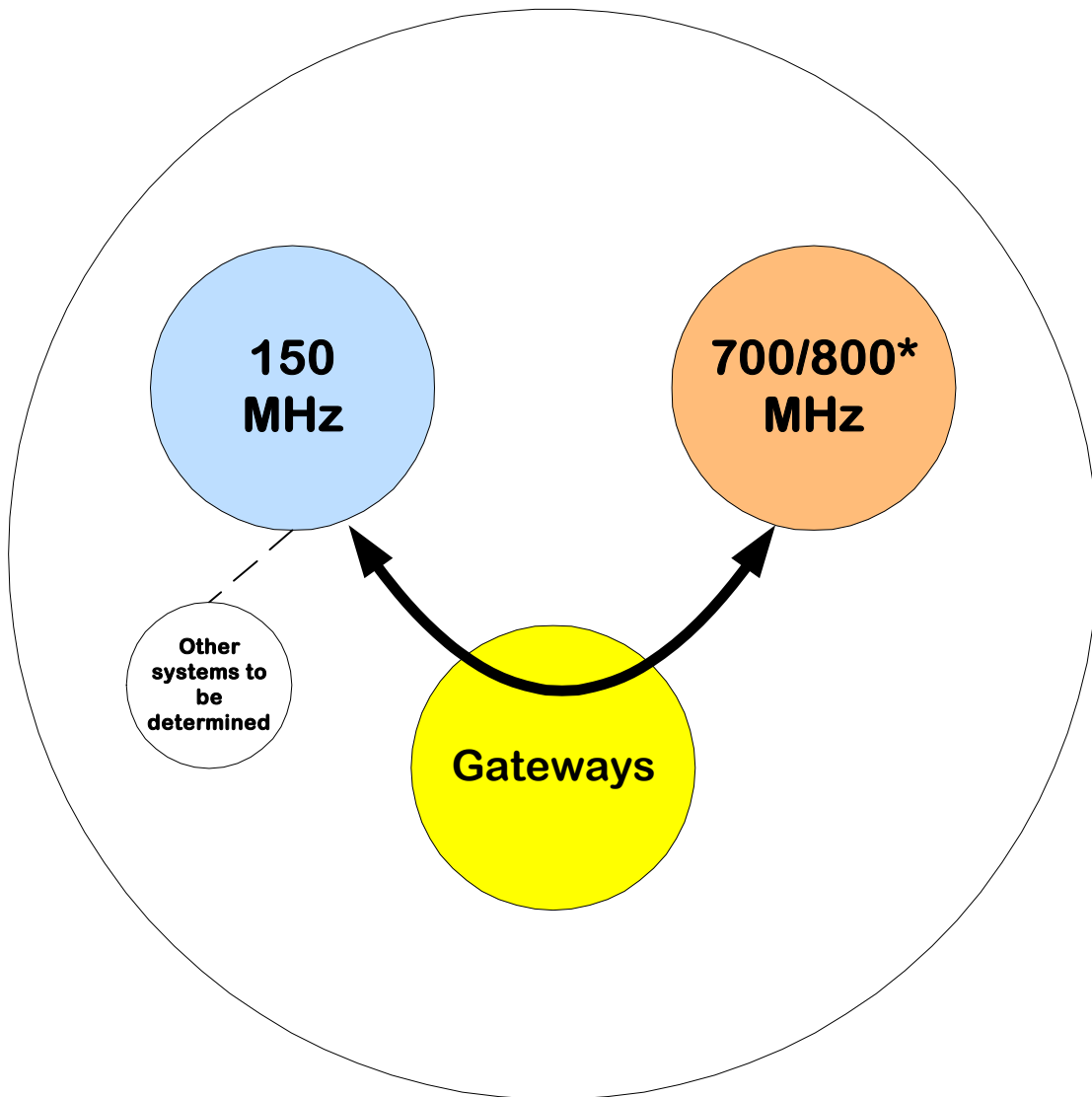
The two main components of the Nevada radio system are the 700/800 MHz component (Core Four*) and the 150 MHz components (mainly in the rurals.) Our short-term proposal is to link these two systems with gateway connections on mutual aide channels. Some of these gateways already exist, and they need to be expanded statewide. A preliminary estimate is that this statewide linkage could be accomplished for approximately $2.4M. Cost does not include integration of other frequency bands, which will require additional expense.

* See "Core Four" next page

COMMUNICATIONS INTEROPERABILITY - THE "CORE FOUR" CONCEPT
Short and Long Term
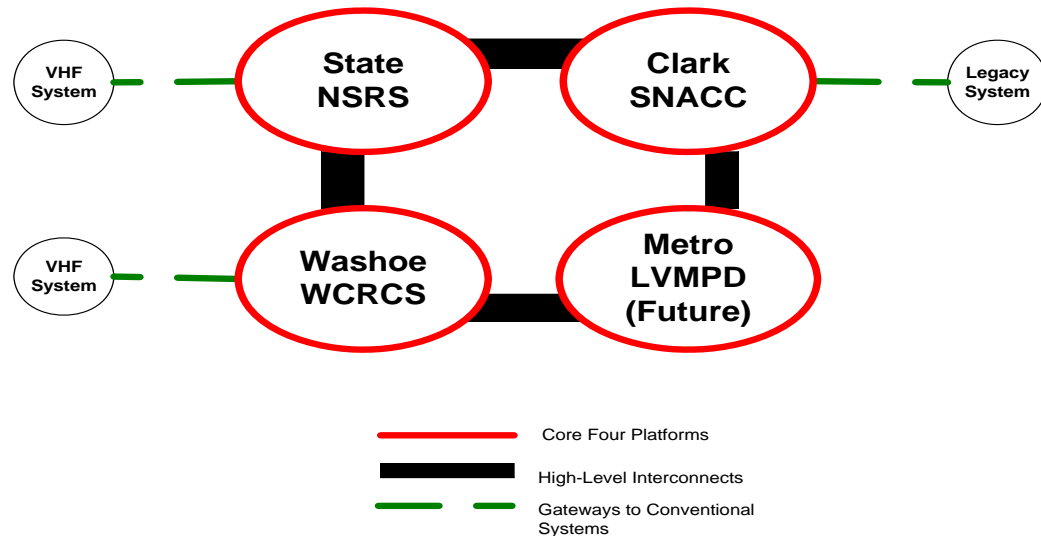
The "Core Four" concept capitalizes on communications systems investments made by each of the Core Four system operators in favor of all Nevada citizens. By connecting these four major trunked systems, a single "virtual" system is created. In turn, as each one of the four major, or other accepted systems, links to their principle mutual aid partners operating on smaller conventional systems, these mutual aid partners will have access to, and through the combined Core Four systems to other first responders.

This initiative will provide an immediate improvement in interoperability between public safety users on the four major systems, and also offer opportunity for improved interoperability with conventional system operators across the State. Leveraging the sophistication and coverage of these large trunked systems offers immediate benefits to emergency responders, and implements the SAFECOM recommendation of constructing a "system of systems".

- **NSRS –** *Nevada Shared Radio System*
- **SNACC –** *Southern Nevada Area Communication Council*
- **WCRCS –** *Washoe County Regional Communication System*
- **LVMPD –** *Las Vegas Metropolitan Police*

Existing

Future

Analog

Digital

Proprietary

Nothing

Digital
Open
Standards
Technology
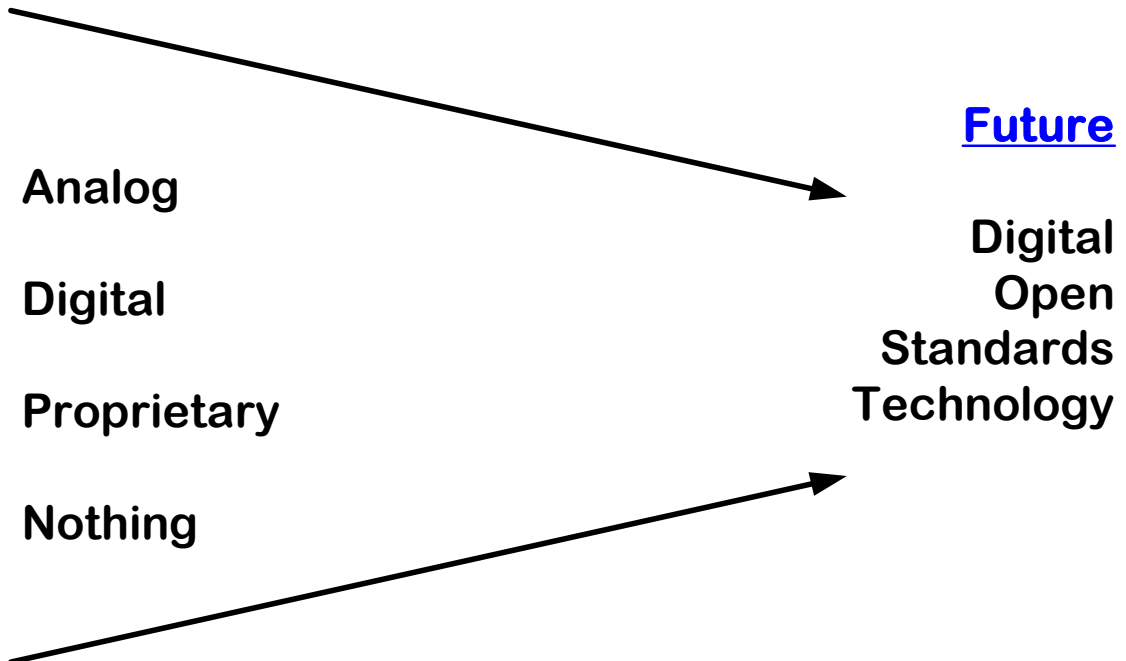
Our plan emphasizes convergence over time, upgrading when equipment otherwise needs replacement on maintenance schedules, not a wholesale change out of existing, operational equipment. We need to preserve the public's existing investments in communications technology that have already been made by agencies around the state. The approach is to require that new purchases comply with the plan, while generally allowing existing equipment to serve out its useful life.

TECHNICAL STANDARD FOR COMMUNICATION SYSTEMS DIGITAL, OPEN-SYSTEM (P25)

Background

In order to move toward long-term convergence, a technical protocol or standard must be adopted.

P25 is an open-system (i.e. non-proprietary), technical standard that has been nationally developed for more than fifteen years. It continues under development as technology evolves and additional parts of the complex standard are addressed.

The P25 technical standard establishes a common protocol, much as a group of people will establish a common language such as English. This allows radios from different vendors, operating in the same frequency band, to effectively communicate using digital technology.

P25 does not address the technical issue of radios operating in differing frequency bands, nor other interoperability issues such as standard operating procedures. Development of a radio frequency plan is required and addressed in action item G5, and gateways between frequency bands in T4.

Recommendation

The long-range plan for achieving communications interoperability includes the long-term convergence of all radio systems within the state to digital, open standards technology, implementing the most current version of the P25 standard available at the time of purchase. This standard should be phased-in throughout the State based on the timetable presented below.

The P25 standard and the following implementation dates are hereby adopted for Nevada governmental agencies at all levels (state, county, city). Exemptions to adoption of this standard will be considered upon written showing of good cause, and only exemption requests approved by the Nevada Homeland Security Commission (hereinafter "Commission") will be implemented.

1. **Effective October 1, 2005 (Fed FY 2006)**

   A. All mobile and portable (i.e. end-user) radio equipment purchased using grant dollars, shall be P25 Common Air Interface capable.
   B. All radio equipment (including consoles and backbone equipment) purchased using grant dollars, for initial implementation and use in a new system shall be capable of supporting P25 Common Air Interface on a system basis.
   C. The "Core Four" Systems are exempt from mandatory compliance with this standard until July 1, 2009
   D. Radio systems that do not use or apply for grant funding are exempt from this standard until July 1, 2007.
   E. Other exemptions may be granted by the Commission on a case-by-case basis.

2. **Effective July 1, 2007**

A.   All mobile and portable (i.e. end-user) radio equipment purchased shall be P25 Common Air Interface capable.
B.   All radio equipment (including consoles and backbone equipment) purchased for initial implementation and use in a new system shall be capable of supporting P25 Common Air Interface on a system basis.
C.   The "Core Four" systems, and any system directly connected to the "Core Four", are exempt from these requirements until July 1, 2009.

3. **Effective July 1, 2009:**

A.   All radio equipment purchased for use in radio systems operating below 512MHz shall be P25 Common Air Interface capable. This includes mobiles, portables and system equipment purchased as replacement for existing systems and new systems.
B.   Mobile radios and portable radios purchased for use in all existing radio systems operating above 512MHz shall be P25 Common Air Interface capable.

4. **Effective July 1, 2011:**

All radio systems equipment purchased in the state, regardless of operating frequency or the system it is purchased for, shall be P25 capable.

5. **Effective July 1, 2013:**

All radio systems and equipment in the state shall be operating in P25 mode for normal, operational voice communications. Multi-mode operation, for interfacing with out-state systems, may be retained and used as needed.

Assumptions

1. "Capable" is defined as the ability to be quickly upgraded via the loading of a software program to actual P25 Common Air Interface operation. "Capable" in this context does not mean the equipment must actually operate in P25 mode when purchased, rather that it be "capable" of simple upgrade to such operational mode at a future time.

2. In every case where purchase of P25 capability is mandated, the requirement is for capability to accommodate the most recently approved version of the P25 standard.

SUMMARY

The 9/11 Commission Report found that:

> *"The inability to communicate was a critical element at World Trade Center, Pentagon, and Somerset County, Pennsylvania, crash sites, where multiple agencies, multiple jurisdictions responded. The occurrence of this problem at three very different sites is strong evidence that compatible and adequate communications among public safety organizations at the local, state, and federal level remains an important problem."[1]*

The Nevada Communications Steering Committee agrees with the 9/11 Commission's findings as described above and have taken steps over the past several years to develop methods to solve the interoperable communications problem.

Purpose of the Nevada Communications Interoperability Plan

The Nevada Communications Interoperability Plan (the Plan) is intended to provide near and long term directions to establish and improve *communications interoperability.* The scope of the intended improvements extends to all organizations providing public safety[2] services within the State of Nevada.

As used in the development of the Plan:

> **"Interoperability is the ability of appropriate officials and personnel to effectively communicate by radio across jurisdictions and with each other, when authorized, as needed and in real time."**

This Plan is presented as an overview to identify general directions toward improving interoperability throughout the state, rather than an agency-by-agency list of items to be undertaken.

What Need Drives this Plan?

In this post-9/11 era, the documented and compelling need is to improve the inter-working of public safety personnel through better communication, and specifically through better *communications interoperability,* thereby improving the safety of both the public and the providers.

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[1] *The 9/11 Commission Report,* pg.397: Command, Control and Communications.
[2] See page 4 for list of Public Safety agencies

Scope and Orientation of this Document

This document is designed as a condensed plan description. It is an effort to present the distilled essence and action plan, with references to a much larger body of developed detail, data, theory and alternatives.

This document is intended for a wide audience of individuals such as officials, administrators, legislators and non-technical users. An effort has been made to minimize non-essential detail and technical jargon.

Organizational Background

While work toward improving interoperability goes back some two decades, the current effort started in December 2002. At that time the first Nevada Government Communication Conference[3] was held. From the 125 attendees, two common themes became clear: a) a statewide forum for discussion of communication issues was needed; and, b) a communications interoperability plan for Nevada should be developed. Reflecting these, the Governor directed the State Chief Information Officer (CIO) to assemble a representative committee and begin developing a plan. Thus the Nevada Communications Steering Committee (NCSC)[4] was created, and began working.

Subsequent to this, the Commission, and a specific requirement for a plan to address public safety communications was created in law by the 2003 Legislature[5]. The NCSC has since worked with to the Commission. The initial Plan was required for implementation by October 1, 2005 pursuant to the Nevada Revised Statute.[6].

Plan Development Process

The process is fundamentally a broadly representative steering committee driving consultants, reviewing and acquiring feedback, and adapting results. NCSC representatives (see Appendix A) are from fire, law enforcement and medical/health disciplines, from urban and rural locals, and from city, county and state agencies. NCSC meetings have been held monthly under Nevada open-meeting laws. The Nevada Department of Information Technology (DoIT) provides administrative support.

In 2003, the NCSC through DoIT successfully applied for a Department of Homeland Security (DHS) planning grant. In mid-2004 Tech/Knowledge (consultant)[7], was hired and began working. The Consultant has developed data through survey and interview, prepared draft recommendations and participated in NCSC meetings discussing plan development.

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[3] *Nevada Government Communication Conference;* aggregated raw comments and summary conclusions. 3Dec02.
[4] More information available at: www.ncsc.nv.gov.
[5] AB441 by the 2003 Nevada Legislative Session, as incorporated into NRS 239.
[6] AB441 originally called for plan implementation 1Jul05, however this has been modified by SB194 in the 2005 Session to 1Oct05.
[7] *A Proposal to Prepare a Communications Interoperability Plan;* from Tech/Knowledge, 10May04; and contract.

In addition, the SAFECOM Office of the Department of Homeland Security (DHS) has offered assistance to Nevada.[8] SAFECOM is the federal government coordinating office for public safety communication interoperability efforts.[9] SAFECOM has offered, and Nevada has accepted, to assist in plan development specifically with additional consultant and expert assessment resources. In return, Nevada will become a "model state" for other states developing plans. Information developed by SAFECOM has been used and integrated throughout the Plan.

Vision

The following statement has been adopted by the NCSC to describe the overall goal envisioned for Nevada:

> ***Providers of public safety and critical infrastructure services in the State of Nevada, in both the public and private sectors, at all levels of government, including local, county, special district, authority, tribal, state and federal, will possess the tools needed to communicate and work together:***

> - *To more effectively address their day-to-day missions*
> - *To respond to and recover from large-scale emergencies*
> - *In real time*
> - *Across disciplines and jurisdictions*
> - *With optimum balance between efficiency and effectiveness*
> - *At the lowest appropriate long-term cost to the public, given the criticality of the public safety mission.[10]*

Survey and Data on Nevada Needs

A survey was conducted by the Consultant in September through December 2004: "*Interoperability & Communications Issues Facing Nevada's Public Safety Community*"

The Consultant identified and contacted 341 public safety agencies in Nevada. They were asked to respond to 179 questions via secure web site. Response was received from 160 agencies, a database developed and analyzed, and extensive results documented.[11]

The developed database, while not complete, will be turned over by the Consultant to the state for continued development, refinement and use.

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[8] *Memorandum of Agreement between the State of Nevada Department of Information Technology and SAFECOM;* Apr05; and SAFECOM "Regional Communications Interoperability Pilot" announcement (See Appendix B

[9] *SAFECOM:* www.safecom.dhs.gov.

[10] Tech/Knowledge recommendations second draft, March 02,2005; Section 5.2, as modified and adopted

[11]Tech/Knowledge recommendations second draft, March 02, 2005; Section 4

Dimensions of Interoperability

Interoperability has been recognized as having more dimensions than simply technology. SAFECOM has developed the *Interoperability Continuum[12],* identifying the dimensions of Governance, Standard Operating Procedures, Technology and Training & Exercises. These dimensions have been adopted and used as seen in the categorization of needs and major plan components.

Major Plan Components

The following summarizes the components and actions identified in *Section 3 - Action Plan* of this document. Note: organization in accordance with SAFECOM Interoperability Continuum.

Governance

- *Organization.* Establish and define a permanent body responsible for coordination of interoperability (G1, G2, and G3).
- *Funding.* Work with the Governor and Legislature to develop a permanent source (G4).
- *Education and Communication.* Provide issue information to legislators, policy makers, administrators and the public; and operational information to first-responders (G6 and G7).
- *Process and Planning.* Work with federal agencies and base future planning on user needs (G5, G8, G9, and T6).

Standard Operating Procedures

- *Operational SOP's.* Develop, test and exercise SOP's consistent with the National Incident Management System (NIMS) (S1, S3).
- *Enabling Policies.* Develop policies implementing SOP's between state and local agencies (S2).

Technology

- *Common and Mutual Aid Channels.* Establish and (where needed) re-establish common and mutual aid frequencies and channels (G6 and T1).
- *Equipment Caches.* Establish and maintain radio equipment caches for emergency situations (T2).
- *Talk group Linkages.* Establish talk groups on shared systems ("Core Four") allowing conventional interconnects (T3, related T4).
- *Gateways.* Construct gateways statewide between disparate frequency bands (T4, related T3).
- *Connect Dispatches.* Construct a network connecting dispatch centers within the state (T5).
- *Standards.* Define through users the minimum standards for new radio equipment and a schedule for implementation (T6).

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[12] See also Interoperability Continuum-SAFECOM Section 1 of this document.

Training and Exercises

- *NIMS Training*. Develop training schedules for public safety personnel on National Incident Management System (NIMS) (E1, related S1).
- *Certify and Credential*. Train and certify Communications Unit Leaders in public safety first-responder disciplines (E2, E5).
- *Regular Refresher Training*. Require regular refresher training (E4).
- *Interagency Exercises*. Regularly schedule and execute interoperability exercises; may be part of larger exercise (E3).

Coverage and Operability

Overarching the issue of *interoperability*, the major issues of *operability* and *coverage* have been identified as effecting public safety agencies, especially in rural areas. "Operability" includes aspects of insufficient or obsolete equipment, and "coverage" relates to geographic areas of a jurisdiction lacking radio system coverage ("dead spots"). While beyond the scope of this interoperability plan, coverage and operability problems have been noted in survey data, interview data and NCSC member statements. Operability and coverage are basic and fundamental to achieving needed interoperability.

ACTION PLAN

Definitions:

Priority
A low (L), medium (M) or high (H) priority is identified based on perception of the relative benefit to interoperability, balanced by the degree of difficulty expected in implementing the recommendation. In that respect, a project with significant impact on interoperability and relative ease of implementation was ranked more highly than a project with the same impact, but a higher degree of difficulty to implement.

Time Period
The time frame within which the item is expected to be accomplished and operational. In some cases the effort is continuous.

Estimated Cost (where included) Methodology of estimate is provided.

GOVERNANCE *(See SAFECOM Interoperability Continuum)*

G1: *Establish the NCSC as a permanent body, with funding and authority as the designated Statewide Interoperability Executive Committee, responsible for the establishment and coordination of interoperable public safety communications within the state, providing advice and counsel to the Commission as it relates to radio communications focused projects.*

> **Implementation:** Legislative and executive action required.
> **Priority:** High
> **Time Period:** Near Term

G2: *Develop regional working groups to provide enhanced local input on communications interoperability issues, without making the NCSC too large to function effectively.*

> **Implementation:** NCSC
> **Priority:** High
> **Time Period:** Near Term

G3: *Work with the Nevada Governor and Legislature to develop a permanent, predictable and stable statewide source of funding for public safety communications.*

> **Implementation:** Legislative and executive action required
> **Priority:** High
> **Time Period:** Mid to Long-Term
> **Prospective Funding Source:** N/A
>
> a. Designate a funding sub-committee tasked with implementing all aspects of the Funding initiative.
> b. Research and develop an inventory of all potential funding sources/mechanisms.
> c. Develop a statewide funding strategy.
> d. Collect and review acquisition plans.
> e. Seek opportunities to share current resources for immediate cost savings and explore partnerships for future funding prospects.
> f. Document agreements between partners that identify funding and resource sharing.
> g. Publicize the criteria for distributing funding so that local representatives will have faith that their needs were taken into account before funding decisions were made.

G4: *Consistent with the provisions of NRS Chapter 414, the Department of Public Safety shall revise, update and promulgate an interagency Radio Frequency Plan. The plan shall comply with rules and regulations established by the Federal Communication Commission, the U.S. Department of Homeland Security and shall be reconciled with surrounding states.*

The Department of Public Safety shall coordinate with and report to the Commission or any designated sub-committee at the pleasure of the committee to ensure adequate progress and compliance with the plan.

Implementation: integrate into the enabling legislation developed in support of Recommendation GI.
Priority: High
Time Period: Near Term

G5: *Educate key policy makers at all levels of government regarding the current state of Nevada's public safety communications, as well as the needs and benefits of continued investments to further interoperable communications.*

Implementation: NCSC
Priority: High
Time Period: Ongoing

G6: *Increase the general public's awareness of the urgent need for interoperability.*

Implementation: NCSC
Priority: High
Time Period: Ongoing

a. Create a stakeholder education subcommittee with clearly defined roles and responsibilities.
b. Develop a comprehensive public education plan with a clearly defined purpose, desired outcomes and implementation tasks.
c. Develop consistent messages.
d. Develop materials and a plan to distribute them.
e. Identify and train spokespersons and maximize speaking opportunities.

G7: *Future-planning efforts will be based on input from the user community.*

Implementation: NCSC adoption and inclusion in any policy or legislation as required
Priority: High
Time Period: Near Term

G8: *Work with Nevada-based senior management of federal agencies to encourage, enhance and support federal participation in the NCSC.*

Implementation: NCSC, Department of Information Technology (DoIT)
Priority: Medium
Time Period: Near Term

G9: *Establish a statewide secure web site that posts interoperability preferences and access methods for all public safety agencies in Nevada.*

Implementation: will require a moderate expenditure of funds (under $25,000)
Priority: Medium
Time Period: Near Term

G10: *Establish a subcommittee responsible for coordinating the process for developing and completing the capabilities assessment and data analysis.*

a. Review, consolidate, and validate the accuracy of data collected in the previous survey and inventories through interviews of focus groups to avoid duplication of efforts.

b. Determine any additional data, questions, and operational and technical information that need to be collected in the capabilities assessment.

c. Research or edit the existing data collection tools to ensure the ability to gather the data necessary for technical and operational assessments.

d. Maximize the uses and applications of the data collected to improve and train on the use of the existing capabilities.

e. Leverage the data collected in long-term planning efforts.

G11: *Establish a subcommittee to ensure that efforts for implementing technical solutions, developing SOPs, improving training, and conducting exercises are coordinated with local practitioners.*

a. Establish local MOUs or agreements to foster accountability.

STANDARD OPERATING PROCEDURES

S1: *Utilize the regional working groups, on a per-discipline basis, to develop, test and exercise standard operating procedures for operational and communications interoperability consistent with the National Incident Management System.*

Priority: High
Time Period: Near Term

S2: *The Nevada Department of Public Safety (DPS) should work with the regional working groups to define, test and exercise formal, statewide policy and procedures for interoperability between local agencies and the DPS, utilizing the existing technology currently deployed.*

Priority: High
Time Period: Near Term

S3: *Develop, test and exercise standard operating procedures for the use of ad hoc gateway interconnect devices based on the SOPs developed for Recommendation S1.*

Priority: Medium
Time Period: Near Term

TECHNOLOGY

T1:   *Establish a formal working relationship with appropriate federal entities to establish common, shared channels for federal, state and local uses.*

Implementation: approach the Chair of the local Federal Executive Association (located in Las Vegas) for assistance in this regard
Priority: High
Time Period: Near Term

T2:   *Purchase and properly maintain caches of portable radios configured to operate on the various proprietary shared systems to provide communications to inbound mutual aid resources.*

Implementation: the operators of the systems with the NCSC taking steps to assist in funding
Priority: High
Time Period: Near to Mid-Term
Estimated Cost: $2,000,000
This estimate is based on (2) caches of 250 radios at an average price of $4000 each, which includes support accessories such as chargers, transport cases, etc.
Prospective Funding Source: Grant

T3:   *Configure talk groups and construct resources on the proprietary shared systems to permit direct interoperation within their coverage areas. (Core Four Concept)*

Implementation: the operators of the systems with the NCSC taking steps to assist in funding
Priority: Medium
Time Period: Near Term

T4:   *Support and encourage a statewide network of inter-tied base stations/repeaters statewide to provide communications gateways between users in disparate frequency bands. (Short Term Gateways)*

Implementation: carried out by the NCSC as these resources are intended to be shared statewide with the entire Nevada public safety community
Priority: High
Time Period: Near Term
Estimated Cost: $2,400,000
This estimate is based on 60 sites @ $40,000/site total. Each site requires (2) 800 MHz radios and (2) VHF radios. The total expenditure may be reduced by recycle of existing surplus NHP equipment. Cost does not include integration of other frequency bands, which will require additional expense.
Prospective Funding Source: Grant and/or appropriation

T5:   *Support and encourage a statewide IP-based network to interconnect public safety communications centers and their associated radio systems.*

Implementation: carried out by the NCSC, as these resources are intended to be shared statewide with the entire Nevada public safety community/the Committee may elect to contract with appropriate departments to assist in the implementation
Priority: Medium
Time Period: Near to Mid-Term

T6: *Utilize the NCSC and the regional working groups as cross-discipline, collaborators for long-term communications system planning, to promote sharing of systems and infrastructure as appropriate.*

The regional working groups should work with individual discipline groups to define minimum standards for public safety radio equipment, including the definition and subsequent implementation of appropriate interoperability channel sets.

Priority: High
Time Period: Near Term

TRAINING & EXERCISES

E1: *In cooperation with and through the existing state training bodies, develop training programs for all public safety personnel in the state based on the NIMS-based Standard Operating Procedures developed under Recommendation S1.*

Implementation: Initial NIMS training now underway through Department of Public Safety
Priority: High
Time Period: Near Term
Prospective Funding Source: Grant

E2: *Train, certify and deploy qualified and credentialed Communications Unit Leaders in all public safety disciplines.*

Implementation: implemented through either administrative law or regulation, or by policy established through the training bodies
Priority: High
Time Period: Near Term

E3: *Carry out regional interagency, cross-discipline interoperability exercises based on DHS exercise guidelines on at least a biennial basis. These exercises may be an element of a larger exercise.*

Implementation: Department of Public Safety
Priority: High
Time Period: Mid-Term

E4: *Once training programs have been developed and delivered for interagency operations, require periodic refresher training.*

Implementation: implemented through either administrative law or regulation, or by policy established through the training bodies
Priority: High
Time Period: Mid-Term

E5: *Develop a credentialing process to facilitate interoperability operations among people unfamiliar with one another.*

Implementation: implemented through either administrative law or regulation, or by policy established through the training bodies
Priority: Medium
Time Period: Mid-Term

REFERENCES

Consultant's Report and Recommendations, Second Draft, March 2005;

SAFECOM, www.safecom.dhs.gov.

"Nevada Communication Interoperability Strategic Plan", non attributed.

NIMS Implementation Requirement Letter to the Governor from Secretary Tom Ridge, Department of Homeland Security

Nevada Government Communication Conference; aggregated raw comments and summary conclusions, December 3, 2002, Carson City, NV

Nevada Communications Steering Committee website: www.ncsc.nv.gov.

2003 Nevada Legislative Session; *Assembly Bill 441*, as incorporated into NRS 239.

A Proposal to Prepare a Communications Interoperability Plan; from Tech/Knowledge, May 10, 2004

Memorandum of Agreement between the State of Nevada Department of Information Technology and SAFECOM, April 2005

SAFECOM *"Regional Communications Interoperability Pilot"* announcement, April 2005

SAFECOM Recommendations to the NV Communications Interoperability Plan (Version 1.0), December 2005

APPENDIX A

NCSC MEMBERSHIP

TERRY SAVAGE (CHAIR)
Chief Information Officer
Nevada Department of Information Technology,
Carson City

JACK STALEY (CO-CHAIR), Director
Support Services, Las Vegas Valley Water District
and Southern Nevada Water Authority, Las Vegas

LOUIS AMELL, Director of Communications
City of Las Vegas Fire Department, Las Vegas

ROBERT CHISEL, Admin. Services Officer
Nevada Department of Transportation, Carson City

DENNIS COBB, Deputy Chief
Technical Services, Las Vegas Metro Police
Department, Las Vegas

JAKE CONELY, Captain
Sparks Fire Department, Sparks

ANTHONY DEMEO, Sheriff,
Nye County Sheriff's Office, Pahrump,

BOB FISHER, Director
NV Broadcasters Association, Las Vegas

MARK FOXEN, Computer Network Specialist
NV Health Division, Carson City

ADAM GARCIA, Director
Police Services University of NV Reno

NEIL HARRIS, Sheriff
Elko County Sheriff's Office, Elko,

DAN HOLLER, Manager
Douglas County, Minden

RONDA HORNBECK, County Commissioner
Lincoln County, Pioche

JAMES JOHNS, Deputy Chief
Reno Police Dept., Reno

CHRISTOPHER K. LAKE, Ph.D
Director, Health Preparedness,
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GREG MARCHIO, Special Agent in Charge
US Secret Service, Las Vegas

ROD MASSEY, Chief Information Officer
Clark County, Las Vegas

PETE MENICUCCI, LTC, SC, Lt Colonel
Nevada National Guard, Carson City

DAN NEWELL, City Manager
City of Yerington, Yerington

THEODORE R. QUASUALA, Chief of Police
Paiute Tribe, Las Vegas

KAY SCHERER, Assistant Director
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APPENDIX B

Regional Communications Interoperability Pilots (RCIP)
"Developing and disseminating tools and models in partnership with public safety at the regional level for public safety nation-wide"

Background
SAFECOM, a program of the Science and Technology (S&T) Directorate's Office for Interoperability and Compatibility (OIC), serves as the umbrella program within the federal government to help local, tribal, state and federal public safety agencies improve public safety response through more effective and efficient interoperable communications. As a public safety practitioner driven program, SAFECOM is working with existing federal communications initiatives, with key public safety stakeholders, and through its new legislative authorities to address the need to develop better technologies and processes for the cross-jurisdictional and cross-disciplinary coordination of existing systems and future networks.

SAFECOM has been granted a number of authorizations, responsibilities, and powers through legislation to address the communications issues facing the public safety community. Section 7304 of the Intelligence Reform and Terrorism Prevention Act of 2004 (Public Law 108-458) authorized the Secretary of Homeland Security, acting through SAFECOM, to carry out at least two Regional Communications Interoperability Pilots (RCIP). SAFECOM will conduct the RCIP projects in the Commonwealth of Kentucky and the State of Nevada by providing assistance and developing tools and models that can be leveraged nationally.

Overview
The purpose of the RCIP projects is to improve interoperable communications nationwide by building the knowledge base of the needs and requirements of the public safety community and developing the tools necessary to address those needs and enhance communications. The RCIP projects will focus on developing models for improving communications and interoperability that take into account a variety of challenges faced by communities across the nation. These models will be built from the local level up as over ninety percent of public safety communications infrastructure is owned and operated at the local and state level. SAFECOM will start the Nevada RCIP in the spring of 2005, which will be shortly followed by the Kentucky RCIP. The results of the RCIP projects will be models and tools for strategic planning and improving communications, which SAFECOM will share with other interested communities.

Approach and Strategy
The RCIP initiative will have components that are both technical and operational in nature to ensure public safety not only has the equipment, but also the non-technical elements that maximize the efficiency of public safety technology. The selection of the pilot locations was based on the criteria from the Intelligence Reform and Terrorism Prevention Act of 2004, such as: the level of risk to the area, the number of local, state, and federal law enforcement agencies located in the area, the number of potential victims from a large scale terrorist attack in the area, and the community's risk and vulnerability. In addition, OIC-SAFECOM composed the following criteria: the level of commitment and buy-in of the region, the articulation of a defined interoperability need by the region, and the ability of the pilots to serve as national models. Key components of SAFECOM's strategy for successfully conducting the RCIP projects include:
- Using a practitioner-driven approach that involves local, state, and federal stakeholders throughout the planning process;
- Working with members of the SAFECOM governance to provide guidance, advice, best practices, and an exchange of information;
- Applying the Interoperability Continuum as a comprehensive framework;
- Partnering with and complementing the efforts of federal agencies, such as the Departments of Defense and Justice the National Institute of Standards and Technology's Office of Law Enforcement Standards, and other DHS initiatives such as the Office of State and Local Government Coordination and Preparedness' Interoperable Communications Technical Assistance Program; and
- Focusing on developing models for improving communications and interoperability that take into account the different communications interoperability issues challenges faced across the nation.

Site Selection
Nevada and Kentucky were selected as two of the locations for the RCIP projects for public safety communications interoperability due to their diverse geography, demographics, critical infrastructure, commitment to advancing interoperability, and commitment to funding. These states and their political subdivisions are attractive options to serve as national models because each has characteristics that are comparable to regions in other parts of the country. SAFECOM intends to leverage the results and information from these projects to develop tools and models for other regions across the nation.

APPENDIX C

Extract From: Strategic Recommendations to the Nevada Communications Interoperability Plan

Executive Summary

This strategic recommendations report provides four practitioner-developed strategic initiatives to improve the *Nevada Communication Interoperability Plan, Version 1.0* (the Nevada Plan). See Appendix A for a complete copy of the Nevada Plan.

The strategic initiatives were developed during the practitioner-driven strategic planning process facilitated by SAFECOM. Six practitioner focus groups were convened across the State of Nevada comprised of public safety practitioners, representatives from local, state, and federal agencies, and elected and appointed officials. The focus group participants addressed the current realities of regional communications interoperability in Nevada and shared a vision for what improved communications interoperability can provide. They suggested a course of action to move Nevada closer to that shared vision. Finally, they validated and prioritized the top four initiatives at the strategic planning session on September 14, 2005.

SAFECOM used the practitioner input and their strategic initiatives to develop recommendations with specific c implementation tasks to enhance public safety interoperable communications capabilities. The four practitioner-developed strategic initiatives are presented below.

1. Governance Initiative:
Establish a governance structure to allow a single point of contact for all interoperability activities

2. Capabilities Assessment Initiative:
Conduct a capabilities assessment and gap analysis using the results to:
• Maximize existing capabilities pending the development of improved communications interoperability
• Increase training and awareness of first responders in how to operationalize current equipment and systems most effectively

3. Funding Initiative:
Secure consistent funding for ongoing development, capital replacement, and maintenance costs and identify partnerships in which resources will be provided

4. Public Education Initiative:
Increase education of the public, elected officials, and policy makers on the requirements and priorities for public safety communications so they have realistic expectations and provide appropriate levels of support

The strategy for improving public safety communications and interoperability is most effective when it involves first responders and public safety practitioners and is driven from the "bottom up." Successful communications interoperability requires engaging different jurisdictions and disciplines and taking action based on practitioner input. The ongoing participation of a broad stakeholder community is imperative to building the capacity for each of the four strategic initiatives and ensuring a shared understanding and shared commitment between member agencies/organizations.

SAFECOM recommends seven actions for consideration while addressing the Governance Initiative:

1. Establish a governance structure that emphasizes transparency, accountability, and collaboration.

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2. Identify the roles and responsibilities of members of the governance structure.
3. Establish when the NCSC has centralized decision-making authority and when the decision making authority is decentralized with NCSC serving as a point of central coordination.
4. Build a relationship with a sponsor at the executive level in the Governor's office.
5. Promote the future sustainability of the governance structure (e.g., by creating a permanent state position that provides administrative support to and coordinates activities for the governing body).
6. Publicize the criteria for distributing funding so that local representatives will have faith that their needs were taken into account before funding decisions were made.
7. Partner with federal agencies already working on communications interoperability in Nevada to leverage their experiences and resources as well as complement and integrate efforts.

SAFECOM recommends nine actions for consideration while addressing the Capabilities Assessment Initiative:

1. Establish a working group responsible for coordinating the process for developing and completing the capabilities assessment and data analysis.
2. Review, consolidate, and validate the accuracy of data collected in the previous survey and inventories through interviews or focus groups to avoid duplication of efforts.
3. Determine any additional data, questions, and operational and technical information that need to be collected in the capabilities assessment.
4. Research or edit the existing data collection tools to ensure the ability to gather the data necessary for a technical and operational assessment.
5. Encourage a comprehensive focus on key interoperability success factors, including governance, SOPs, technology, training and exercises, and usage, as discussed in the Interoperability Continuum.
6. Ensure that efforts for implementing technical solutions, developing SOPs, improving training, and conducting exercises are coordinated with local practitioners.
7. Maximize the uses and applications of the data collected to improve and train on the use of the existing capabilities.
8. Leverage the data collected in long-term planning efforts.
9. Establish local MOUs or agreements to foster accountability.

SAFECOM recommends seven actions for consideration while addressing the Funding Initiative:

1. Designate a funding working group tasked with implementing all aspects of the Funding Initiative.
2. Research and develop an inventory of all potential funding sources/mechanisms.
3. Develop a statewide funding strategy.
4. Collect and review acquisition plans.
5. Seek opportunities to share current resources for immediate cost savings and explore partnerships for future funding prospects.
6. Document agreements between partners that identify funding and resource sharing.
7. Review research on best practices and lessons learned. SAFECOM recommends seven actions for consideration while addressing the Public Education Initiative:
1. Create a public education subcommittee with clearly defined roles and responsibilities.
2. Develop a comprehensive public education plan with a clearly defined purpose, desired outcomes and implementation tasks.
3. Develop consistent messages.
4. Develop materials and a plan to distribute them.
5. Identify and train spokespersons and maximize speaking opportunities.
6. Seek out media coverage.
7. Educate public officials on the issues related to improving communications interoperability.

For each implementation task, SAFECOM recommends the NCSC assign a specific timeframe in terms of months and/or years required to accomplish the task and designate a lead coordinator responsible for

prioritizing and implementing the task. SAFECOM recommends Nevada work with practitioners to develop performance measures to assess the progress on the four strategic initiatives. Finally, to build support for communications interoperability efforts, SAFECOM recommends the NCSC identify some tasks for each of the four strategic initiatives that will be implemented within the first 90 days.